

Reasons for Allowance

1. An examiner's amendment to the record appears below. This was made to bring out the allowable features into all of the independent claims, as well as remedy a potential 101 issue. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Please amend the claims as follows:

1. (Currently Amended) An apparatus for producing a perceptible representation of program data windows, comprising:

an arbiter adapted to:

(a) select a program to be a dominant program from among a plurality of programs seeking which have requested, from the arbiter, a master persistence attribute to display a program data window according to a predetermined priority hierarchy, and

(b) assign the master persistence attribute to the selected program,

wherein the program data window of the selected program is displayed concurrently with program data windows of other programs of the plurality of programs while not being obscured by the program data windows of the other programs or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one program data window of the other programs.

2. (Previously Presented) The apparatus of claim 1, further comprising:
an access control table, operationally coupled with the arbiter, adapted to contain indicia representative of the predetermined priority hierarchy.

3. (Previously Presented) The apparatus of claim 2, further comprising:
a configuration application program, operationally coupled with the access control table, adapted to configure the arbiter with the predetermined priority hierarchy.

4. (Previously Presented) The apparatus of claim 1, further comprising:
an I/O manager, operationally coupled with the arbiter, adapted to communicate display data for the perceptible representation between the plurality of programs and a display.

5. (Previously Presented) The apparatus of claim 4, further comprising:
a graphics device driver, operationally coupled with the I/O manager and the display, adapted to provide the display data to the display.

6. (Previously Presented) The apparatus of claim 1, further comprising:
a graphics device driver, operationally coupled with the arbiter, adapted to transmit the display data for the perceptible representation to a display.

7. (Previously Presented) The apparatus of claim 2, wherein the indicia include one of a process ID (PID), a window ID (WID), a priority, revoked and repudiated credentials, an authentication token or key, a master persistence attribute authorization, descriptive text, a program status, a system status, an accessible display region, and an excluded displayed region.

8. (Previously Presented) The apparatus of claim 1, wherein the arbiter further comprises at least one of a rules engine, a state machine, and a content-addressable memory that provides the predetermined priority hierarchy for selecting the program to be the dominant program.

9. (Previously Presented) The apparatus of claim 6, further comprising a gatekeeper adapted to select given programs of the plurality of programs to be granted access to the arbiter to seek the master persistence attribute according to the predetermined priority hierarchy.

10. (Currently Amended) A graphic display apparatus, comprising:
a gatekeeper adapted to select given programs of a plurality of programs to be granted a key to request a persistence attribute according to a predetermined priority hierarchy, the

persistence attribute enabling a selected program of the given programs, upon receipt of the persistence attribute, to display a program data window of the selected program concurrently with program data windows of the other given programs while not being obscured by the program data windows of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one program data window of the other given programs.

11. (Previously Presented) The graphic display apparatus of claim 10, further comprising:

a graphics device driver, operationally coupled with the gatekeeper, adapted to provide display data for the program data windows of the given programs to a display.

12. (Previously Presented) The graphic display apparatus of claim 11, further comprising:

an arbiter adapted to:

(a) select a program to be a dominant program from the given programs seeking the persistence attribute, and

(b) assign the persistence attribute to the selected program.

13. (Previously Presented) The graphic display apparatus of claim 12, further comprising:

an access control table, operationally coupled with the arbiter, adapted to store indicia representative of the predetermined priority hierarchy.

14. (Previously Presented) The graphic display apparatus of claim 10, further comprising:

an I/O manager, operationally coupled with the gatekeeper, adapted to manage communication of graphical data between the given programs and a display.

15. (Previously Presented) The graphic display apparatus of claim 10, further comprising:

an application manager, operationally coupled with the gatekeeper, adapted to prevent unauthorized access to an operating system by the given programs.

16. (Previously Presented) The graphic display apparatus of claim 15, further comprising:

a graphics device driver, operationally coupled with the application manager, adapted to provide graphical data to display the program data windows of the given programs on the display.

17. (Previously Presented) The graphics display apparatus of claim 10, further comprising:

a configuration application program, operationally coupled with the gatekeeper, adapted to configure the gatekeeper with the predetermined priority hierarchy.

18. (Previously Presented) The graphic display apparatus of claim 10, further comprising:

a configuration table, operationally coupled with the gatekeeper, adapted to store indicia representative of the predetermined priority hierarchy.

19. (Previously Presented) The apparatus of claim 18, wherein the indicia include one of a process ID (PID), a window ID (WID), a priority, revoked and repudiated credentials, an authentication token or key, a master persistence attribute authorization, descriptive text, a program status, a system status, an accessible display region, and an excluded display region.

20. (Currently Amended) A graphic display apparatus comprising:

(a) a gatekeeper adapted to select given programs of a plurality of programs seeking which have requested, from the gatekeeper, to be granted a master persistence display attribute according to a predetermined priority hierarchy, and

(b) an arbiter adapted to:

(1) select a program to be a dominant program from the given programs; and

(2) assign the master persistence display attribute to the selected program

according to the predetermined priority hierarchy,

wherein the apparatus displays a program data window of the selected program concurrently with program data windows of other programs of the given programs while not being obscured by the program data windows of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one program data window of the other programs.

21. (Previously Presented) The graphic display apparatus of claim 20, further comprising:

one of (i) a configuration table, operationally coupled with at least one of the arbiter and the gatekeeper, adapted to contain first indicia representative of the predetermined priority hierarchy, and (ii) an access control table, operationally coupled with at least one of the arbiter and the gatekeeper, adapted to contain second indicia representative of the predetermined priority hierarchy.

22. (Previously Presented) The graphic display apparatus of claim 20, further comprising:

a configuration application, operationally coupled with at least one of the configuration table and the access control table, adapted to configure at least one of the arbiter and the gatekeeper.

23. (Previously Presented) The graphic display apparatus of claim 20, further comprising:

an I/O manager, operationally coupled with at least one of the arbiter and the gatekeeper, adapted to communicate display data for the program data windows of the selected program and the other programs between at least one application program and a display.

24. (Previously Presented) The graphic display apparatus of claim 23, further comprising:

a graphics device driver, operationally coupled with the I/O manager and the display, adapted to provide the display data to the display.

25. (Previously Presented) The graphic display apparatus of claim 24, further comprising:

a display buffer operationally coupled with the graphic device driver.

26. (Previously Presented) The graphic display apparatus of claim 20, further comprising:

a graphics device driver, operationally coupled with at least one of the arbiter and the gatekeeper, adapted to provide display data to a display.

27. (Previously Presented) The graphic display apparatus of claim 26, further comprising:

a display buffer operationally coupled with the graphics device driver.

28. (Previously Presented) The graphic display apparatus of claim 26, further comprising:

an I/O manager, operationally coupled with the graphics device driver, adapted to facilitate communication between an application program and the display.

29. (Previously Presented) The graphic display apparatus of claim 20 further comprising:

an application manager, operationally coupled with at least one of the gatekeeper and the arbiter, adapted to prevent unauthorized access to an operating system by the given programs.

30. (Previously Presented) The apparatus of claim 21, wherein at least one of the first indicia and the second indicia include one of a process ID (PID), a window ID (WID), a priority, revoked and repudiated credentials, an authentication token or key, a master persistence attribute authorization, descriptive text, a program status, a system status, an accessible display region, and an excluded display region.

31. (Currently Amended) A graphics system comprising:

- (a) a video input adapted to receive a graphical data signal;
- (b) a video output operationally coupled with a display;
- (c) a display controller operationally coupled with the video input and adapted to selectively transmit the graphical data signal to the video output; and
- (d) an arbiter operationally coupled with the display controller, the arbiter adapted to effect the selective transmission by granting a persistence attribute, according to a predetermined priority hierarchy, to a window associated with a program which has requested, from the arbiter, the persistence attribute for displaying data on the display, the display controller adapted to selectively transmit responsive to the arbiter,

wherein the video output is further adapted to write data to a set of pixel memory locations, which are later read by the display, and

wherein [[a]] the window which has been granted the persistence attribute by the arbiter has exclusive access to a portion of the set of pixel memory locations in place of at least one other window which would otherwise have access to the portion of the set of pixel memory locations or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one program data window of other programs.

32. (Previously Presented) The graphics system of claim 31, further comprising a CPU interface adapted to operationally couple the graphics system to a CPU, the CPU adapted to receive display control signals and the arbiter adapted to be responsive thereto.

33. (Previously Presented) The graphics system of claim 32, wherein the CPU includes a gatekeeper operationally coupled with the arbiter and adapted to transmit the predetermined priority hierarchy thereto.

34. (Previously Presented) The graphics system of claim 32, wherein the CPU includes a gatekeeper operationally coupled with the arbiter and adapted to select display control signals having access to the arbiter.

35. (Previously Presented) The graphics system of claim 34, further comprising an arbiter access control table adapted to receive indicia relevant to the predetermined priority hierarchy.

36. (Previously Presented) The graphics system of claim 35, wherein the indicia include one of a process ID (PID), a window ID (WID), a priority, revoked and repudiated credentials, an authentication token or key, a master persistence attribute authorization, descriptive text, a program status, a system status, an accessible display region, and an excluded display region.

37. (Currently Amended) A method of assigning a persistence attribute to at least one of a plurality of programs, the method comprising:

- (a) requesting a master persistence attribute from a gatekeeper;
- (b) assigning a set of priority rules to the gatekeeper via a configuration application program;
- (c) granting keys to given program[[s]] of the plurality of program programs with the gatekeeper, the keys adapted to allow the given program[[s]] access to an arbiter;

- (d) examining an arbiter access control table with the arbiter, the arbiter access control table being adapted to store a predetermined priority hierarchy; and
- (e) assigning the persistence attribute to a selected program of the given programs, the persistence attribute adapted to grant the selected program access to a dominant display window,

wherein the dominant display window is adapted to display data of the selected program concurrently with display windows of other programs of the given programs while not being obscured by the display windows of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one of the display windows of the other programs.

38. (Currently Amended) A computer readable storage medium having recorded thereon a computer program product ~~recorded on a computer readable medium~~ for assigning a master persistence attribute to a selected program of a plurality of programs which have requested the master persistence attribute from an arbiter, the computer program product comprising:

- (a) computer readable program code that, when executed, provides a gatekeeper adapted to grant an access token to the plurality of programs, the access token adapted to allow access to [[an]] the arbiter according to a predetermined access hierarchy; and
- (b) computer readable program code by which the arbiter assigns the master persistence attribute to the selected program, thereby granting access to a dominant display window,

wherein the dominant display window is adapted to display data of the selected program concurrently with display windows of other programs while not being obscured by the display windows of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one display window of the other programs.

39. (Previously Presented) The [[computer program product]] storage medium of claim 38, further comprising computer readable program code by which the arbiter examines an arbiter access control table adapted to store the predetermined access hierarchy.

40. (Previously Presented) The [[computer program product]] storage medium of claim 39, further comprising computer readable program code adapted to assign a set of access rules to the gatekeeper and to assign a set of priority rules to the arbiter using a configuration application program.

Art Unit: 2174

41. (Currently Amended) A method of assigning a master persistence display attribute to a selected application program of a plurality of application programs, the method comprising:

- (a) requesting the persistence attribute from a gatekeeper;
- (b) accessing, with the gatekeeper, a configuration table adapted to store a predetermined priority hierarchy;
- (c) granting, with the gatekeeper, keys to given application programs of the plurality of programs;
- (d) applying the keys, with the given application programs, to access an arbiter adapted to examine an arbiter access control table adapted to store the predetermined priority hierarchy; and
- (e) assigning, with the arbiter, the master persistence display attribute to the selected application program, the master persistence attribute adapted to grant the selected program access to a dominant display window,

wherein the selected program displays data in the dominant display window concurrently with display windows of other programs of the given programs while not being obscured by the display windows of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one of the display windows of the other programs.

42. (Currently Amended) An apparatus for producing a perceptible representation of program data windows, the apparatus comprising an arbiter adapted to select a program to be a dominant program from among a plurality of programs seeking which have requested a master persistence attribute to display a program data window according to a predetermined priority hierarchy, and to assign the master persistence attribute to the selected program,

Art Unit: 2174

wherein the perceptible representation of program data windows is rendered on one of a computer, a communication pad, a telephony device, a handheld remote control device, and a handheld computing device, and

wherein the selected program displays a dominant program data window concurrently with program data windows of other programs while not being obscured by the program data window of the other programs, or by a subsequent window being focused on or by a subsequent program requesting the master persistence attribute, and while overlapping at least one program data window of the other programs.

43. (Previously Presented) The apparatus of claim 42 wherein a medium by which data is communicated to the apparatus comprises one of a wireless/RF channel, a wire-based channel, a cable-based channel, and a fiberoptic channel.

44. (Canceled)

Authorization for this examiner's amendment was given in a telephone interview with Mr. Shane Kennedy on 8/8/08.

2. The following is an examiner's statement of reasons for allowance: The Examiner's amendment 8/8/08 places the application into condition for allowance by bringing into all the independent claims the additional features that the program data window with the assigned master persistence attribute not only is not obscured by other program data windows, but also will not be obscured by any subsequent window being focused upon and also not by any subsequent program requesting the master persistence attribute. That is, once the attribute is assigned, even another program seeking the attribute will not be able to

Art Unit: 2174

obscure the program data window already assigned to the attribute. The prior art shows dominant or "top only" windows, and a combination of the art may even suggest seeking a persistence key which would assign a dominant window, but the art does not teach a program data window remaining un-obscured even when another program requests a persistence attribute. Also, with the Examiner's amendment, every independent claim recites the arbiter or gatekeeper features. Also, the Examiner's amendment remedies a possible 101 issue with claims 38-40. The features combined in the independent claims (1 - apparatus, 10 - graphic display apparatus, 20 - graphic display apparatus with gatekeeper and arbiter, 31 - graphics system, 37 - method with priority rules, 39 - storage medium, 41- method with configuration and access control tables) are not set forth in the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven P. Sax whose telephone number is (571) 272-4072. The examiner can normally be reached on Monday thru Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The

Art Unit: 2174

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P Sax/
Primary Examiner, Art Unit 2174
